

CLAIMS

The embodiments of the invention in which an exclusive property or right is claimed are defined as follows. Having thus described the invention
5 what is claimed is:

1. A toggle switch apparatus, comprising:

a toggle mechanism associated with a plurality of basic switches
10 maintained within a tubular housing;

an actuator associated with at least one spring which actuates said plurality of basic switches, wherein said actuator and said at least one spring are located within said tubular housing; and
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a lead wire termination assembly configured within said tubular housing, wherein said lead wire termination assembly comprises a plurality of lead wires attached to a plurality of pin contacts that exit through a cover of said tubular housing, thereby permitting said toggle switch apparatus to be
20 actuated manually in a maintained position during high gravity conditions.

2. The apparatus of claim 1 wherein said tubular housing comprises a sealed metal tube.

25 3. The apparatus of claim 1 further comprising a header which is sealed into said tubular housing.

4. The apparatus of claim 3 further comprising a glass-to-metal seal which seals said header into said tubular housing.
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5. The apparatus of claim 1 wherein said cover comprises a metal cover.

6. The apparatus of claim 1 wherein said plurality of basic switches comprises at least one basic switch.
7. The apparatus of claim 1 wherein said plurality of basic switches
5 comprises at least six basic switches.
8. The apparatus of claim 1 wherein said at least six basic switches are aligned within said tubular housing in a row.
- 10 9. A toggle switch method, comprising the steps of:
- associating a toggle mechanism with a plurality of basic switches maintained within a tubular housing;
- 15 associating an actuator with at least one spring for actuating said plurality of basic switches, wherein said actuator and said at least one spring are located within said tubular housing; and
- providing a lead wire termination assembly within said tubular
20 housing, wherein said lead wire termination assembly comprises a plurality of lead wires attached to a plurality of pin contacts that exit through a cover of said tubular housing, thereby permitting said toggle switch apparatus to be actuated manually in a maintained position during high gravity conditions.
- 25 10. The method of claim 9 further comprising the step of configuring said tubular housing to comprise a sealed metal tube.
11. The method of claim 9 further comprising the step of sealing a header into said tubular housing.
- 30 12. The method of claim 11 further comprising the step sealing said header into said tubular housing utilizing a glass-to-metal seal.

13. The method of claim 9 wherein said cover comprises a metal cover.
14. The method of claim 9 wherein said plurality of basic switches
5 comprises at least one basic switch.
15. The method of claim 9 wherein said plurality of basic switches
comprises at least six basic switches
- 10 16. The method of claim 15 further comprising the step of aligning said at
least six basic switches in a row within said tubular housing.
17. A toggle switch system, comprising:
- 15 an electronic system under a control of a toggle mechanism
associated with a plurality of basic switches maintained within a tubular
housing;
- an actuator associated with at least one spring which actuates said
20 plurality of basic switches, wherein said actuator and said at least one spring
are located within said tubular housing; and
- a lead wire termination assembly configured within said tubular
housing, wherein said lead wire termination assembly comprises a plurality
25 of lead wires attached to a plurality of pin contacts that exit through a cover
of said tubular housing, thereby permitting said toggle switch apparatus to be
actuated manually in a maintained position during high gravity conditions.
18. The system of claim 1 wherein said tubular housing comprises a
30 sealed metal tube.
19. The system of claim 1 further comprising a header which is sealed

into said tubular housing and a glass-to-metal seal which seals said header into said tubular housing, and wherein said cover comprises a metal cover.

20. The system of claim 1 wherein said electronic system comprises a
5 high-performance aircraft.